

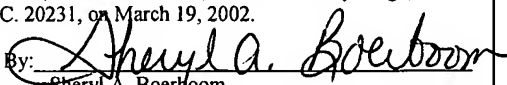
10/027,736

RECEIVED
JUN 21 2002
PATENT
TEC CENTER 1600/2900

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	PRESTA ET AL.	Examiner:	UNKNOWN
Serial No.:	10/027,736	Group Art Unit:	UNKNOWN
Filed:	DECEMBER 19, 2001	Docket No.:	11669.92US01
Title:	NON-HUMAN Fc RECEPTORS AND METHODS OF USE		

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence and the paper(s), as described herein, are being deposited in the United States Postal Service, as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on March 19, 2002.

By: 
Sheryl A. Boerboom

INFORMATION DISCLOSURE STATEMENT (37 C.F.R. § 1.97(b))

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

With regard to the above-identified application, the items of information listed on the enclosed Form 1449 are brought to the attention of the Examiner.

This statement should be considered because it is submitted within three months of the filing date of the above-identified application, which is not an application under 37 C.F.R. § 1.53(d). Accordingly, no fee is due for consideration of the items listed on the enclosed Form 1449.

In accordance with 37 C.F.R. § 1.98(a)(2), a copy of each document or other information listed on the enclosed Form 1449 is provided.

No representation is made that a reference is "prior art" within the meaning of 35 U.S.C. §§ 102 and 103 and Applicants reserve the right, pursuant to 37 C.F.R. § 1.131 or otherwise, to establish that the reference(s) are not "prior art." Moreover, Applicants do not represent that a reference has been thoroughly reviewed or that any relevance of any portion of a reference is intended.

Consideration of the items listed is respectfully requested. Pursuant to the provisions of M.P.E.P. 609, it is requested that the Examiner return a copy of the attached Form 1449, marked

as being considered and initialed by the Examiner, to the undersigned with the next official communication.

Please charge any additional fees or credit any overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

Date: March 19, 2002

Katherine M. Kowalchuk

Katherine M. Kowalchuk
Reg. No. 36,848
KMK:sab





IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: PRESTA ET AL.
Serial No.: 10/027,736
Filed: DECEMBER 19, 2001
Confirmation No.: 9756
Due Date: MARCH 19, 2002
Title: NON-HUMAN Fc RECEPTORS AND METHODS OF USE

Examiner: UNKNOWN
Group Art Unit: UNKNOWN
Docket: 11669.92US01
Notice of Allow.
Date:

RECEIVED
JUN 21 2002
TECH CENTER 160012900

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence and the paper(s), as described herein, are being deposited in the United States Postal Service, as first class mail, with sufficient postage, in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on March 19, 2002.

By: *Sheryl A. Boerboom*
Sheryl A. Boerboom

Commissioner for Patents
Washington, D.C. 20231

Sir:

We are transmitting herewith the attached:

- ☒ Transmittal Sheet in duplicate containing Certificate of Mailing
- ☒ Information Disclosure Statement, Form 1449, 75 References
- ☒ Return postcard

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers or any future reply, if appropriate. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725. A duplicate of this sheet is enclosed.

MERCHANT & GOULD P.C.
P.O. Box 2903, Minneapolis, MN 55402-0903
612.332.5300

By: *Katherine M. Kowalchuk*
Name: Katherine M. Kowalchuk
Reg. No.: 36,848
KKowalchuk:sab



FORM P-4E INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION (Use several sheets if necessary)	Docket Number: 11669.92USU1	Application Number: 10/027,736
	Applicant: PRESTA ET AL.	
	Filing Date: 12/19/2001	Group Art Unit: UNKNOWN

U.S. PATENT DOCUMENTS						
EXAMINER INITIAL	DOCUMENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	4,518,584	05/21/1985	Mark et al.			
	4,737,462	04/12/1988	Mark et al.			
	5,824,487	10/20/1998	Ravetch et al.			
	5,877,396	03/02/1999	Ravetch et al.			
	6,194,551 B1	02/27/2001	Idusogie et al.			

FOREIGN PATENT DOCUMENTS							
	DOCUMENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
	Adams, D. et al., "Tumors undergoing rejection induced by monoclonal antibodies of the IgG2a isotype contain increased numbers of macrophages activated for a distinctive form of antibody-dependent cytotoxicity", <i>Proc. Natl. Acad. Sci. USA</i> , 81:3506-3510 (June 1984) ✓
	Allen, J. et al., "Nucleotide sequence of three cDNAs for the human high affinity Fc receptor (FcRI)", <i>Nucleic Acids Research</i> , Vol. 16, No. 24, pp. 11824 (1988) ✓
	Allen, J. et al., "Isolation and Expression of Functional High-Affinity Fc Receptor Complementary DNAs", <i>Science</i> , Vol. 243, pp. 378-381 (January 20, 1989) ✓
	Amigorena, S. et al., "Cytoplasmic Domain Heterogeneity and Functions of IgG Fc Receptors in B Lymphocytes", <i>Science</i> , Vol. 256, pp. 1808-1812 (June 26, 1992) ✓
	Anderson, D. et al., "Targeting Cytotoxic Immunotherapy", <i>Biochemical Society Transactions</i> , Vol. 25, No. 2, pp. 705-708 (May 1997) ✓
	Angal, S. et al., "A Single Amino Acid Substitution Abolishes the Heterogeneity of Chimeric Mouse/Human (IgG4) Antibody", <i>Molecular Immunology</i> , Vol. 30, No. 1, pp. 105-108 (1993) ✓
	Bauer, C. et al., "A genetic enrichment for mutations constructed by oligodeoxynucleotide-directed mutagenesis", <i>Gene</i> , 37:73-81 (1985) ✓
	Bjorkman, P. et al., "Structure of the human class I histocompatibility antigen, HLA-A2", <i>Nature</i> , 329:506-512 (October 8, 1987) ✓



EXAMINER	DATE CONSIDERED
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.	

FORM 1449* INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION (Use several sheets if necessary)	Docket Number: 11669.92USU1	Application Number: 10/027,736
	Applicant: PRESTA ET AL.	
	Filing Date: 12/19/2001	Group Art Unit: UNKNOWN

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
	Bowie, J. et al., "Deciphering the Message in Protein Sequences: Tolerance to Amino Acid Substitutions", <i>Science</i> , 247:1306-1310 (March 16, 1990)
	Brooks, D. et al., "Structure and Expression of Human IgG FcRII(CD32): Functional Heterogeneity is Encoded by the Alternatively Spliced Products of Multiple Genes", <i>The Journal of Experimental Medicine</i> , Vol. 170, No. 4, 1369-1385 (October 1989)
	Burton, D., "Immunoglobulin G: Functional Sites", <i>Molecular Immunology</i> , Vol. 22, No. 3, pp. 161-206 (1985)
	Capel, P., et al., "Heterogeneity of Human IgG Fc Receptors", <i>Immunomethods</i> , 4:25-34 (1994)
	Clark, M. et al., "A single amino acid distinguishes the high-responder from the low-responder form of Fc receptor II on human monocytes", <i>Eur. J. Immunol.</i> , 21:1911-1916 (1991)
	Clynes, R. et al., "Inhibitory Fc receptors modulate <i>in vivo</i> cytotoxicity against tumor targets", <i>Nature Medicine</i> , Vol. 6, No. 4, pp. 443-446 (April 2000)
	Collins, E. et al., "The three-dimensional structure of a class I major histocompatibility complex molecule missing the $\alpha 3$ domain of the heavy chain", <i>Proc. Natl. Acad. Sci. USA</i> , 92:1218-1221 (February 1995)
	Cosman, D. et al., "Cloning, sequence and expression of human interleukin-2 receptor", <i>Nature</i> , 312:768-771, (December 1984)
	Cosman, D. et al., "High Level Stable Expression of Human Interleukin-2 Receptors in Mouse Cells Generates Only Low Affinity Interleukin-2 Binding Sites", <i>Molecular Immunology</i> , Vol. 23, No. 9, pp. 935-941 (1986)
	Coussens, L. et al., "Tyrosine Kinase Receptor with Extensive Homology to EGF Receptor Shares Chromosomal Location with <i>neu</i> Oncogene", <i>Science</i> , 230:1132-1139 (December 6, 1985)
	Craik, C., "Use of Oligonucleotides for Site-Specific Mutagenesis", <i>BioTechniques</i> , Vol. 3, No. 1, pp. 12-19 (January/February 1985)
	Cunningham, B. et al., "The Complete Amino Acid Sequence of $\beta 2$ -Microglobulin", <i>Biochemistry</i> , Vol. 12, No. 24, pp. 4811-4822 (November 20, 1973)
	de Haas, M. et al., "Fc γ receptors of phagocytes", <i>The Journal of Laboratory and Clinical Medicine</i> , Vol. 126, No. 4, pp. 330-341 (October 1995)
	de Haas, M. et al., "A Triallelic Fc γ Receptor Type IIIA Polymorphism Influences the Binding of Human IgG by NK Cell Fc γ RIIIa", <i>The Journal of Immunology</i> , Vol. 156, No. 8, pp. 2948-2955 (April 15, 1996)
	Debré, M. et al., "Infusion of Fc γ fragments for treatment of children with acute immune thrombocytopenic purpura", <i>Lancet</i> , Vol. 342, No. 8877, pp. 945-949 (October 16, 1993)



EXAMINER	DATE CONSIDERED
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.	

FORM 1449 INFORMATION DISCLOSURE STATEMENT IN AN APPLICATION (Use several sheets if necessary)	Docket Number: 11669.92USU1	Application Number: 10/027,736
	Applicant: PRESTA ET AL.	
	Filing Date: 12/19/2001	Group Art Unit: UNKNOWN

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)	
	Deo, Y. et al., "Clinical significance of IgG Fc receptors and FcγR-directed immunotherapies", <i>Immunology Today</i> , Vol. 18, No. 3, pp. 127-135 (March 1997)
	Eaton, D. et al., "Construction and Characterization of an Active Factor VIII Variant Lacking the Central One-Third of the Molecule", <i>Biochemistry</i> , Vol. 25, No. 26, pp. 8343-8347 (December 30, 1986)
	Engelhardt, W. et al., "Distribution, inducibility and biological function of the cloned and expressed human βFc receptor II", <i>Eur. J. Immunol.</i> , 20:1367-1377 (1990)
	EU Index in Kabat et al., "Sequences of Proteins of Immunological Interest", Vol. III, 5th Ed., <i>Public Health Service</i> , National Institutes of Health, Bethesda, MD, pp. 2246 (1991)
	Gavin, A. et al., "Molecular basis for the interaction of Fc receptors with immunoglobulins", <i>The Immunoglobulin Receptors and their Physiological and Pathological Roles in Immunity</i> , pp. 11-35 (1998)
	Gessner, J. et al., "The IgG Fc receptor family", <i>Annals of Dermatology</i> , Vol. 76, No. 5, pp. 231-248 (May 1998)
	Gessner, J. et al., "The Human Low Affinity Immunoglobulin G Fc Receptor III-A and III-B Genes", <i>The Journal of Biological Chemistry</i> , Vol. 270, No. 3, pp. 1350-1361 (January 20, 1995)
	Ghetie, V. et al., "FcRn: the MHC class I-related receptor that is more than an IgG transporter", <i>Immunology Today</i> , 18:592-598 (December 1997)
	Gluzman, Y., "SV40-Transformed Simian Cells Support the Replication of Early SV40 Mutants", <i>Cell</i> , Vol. 23, No. 1, pp. 175-182 (January 1981)
	Gorman, C. et al., "Transient Production of Proteins Using an Adenovirus Transformed Cell Line", <i>DNA and Protein Engineering Techniques</i> , Vol. 2, No. 1, pp. 3-10 (1990)
	Güssow, D. et al., "The Human β ₂ -Microglobulin Gene: Primary Structure and Definition of the Transcriptional Unit", <i>The Journal of Immunology</i> , Vol. 139, No. 9, pp. 3132-3138 (November 1, 1987)
	Hibbs, M. et al., "Molecular cloning of a human immunoglobulin G Fc receptor", <i>Proc. Natl. Acad. Sci. USA</i> , 85:2240-2244 (April 1988)
	Ierino, F. et al., "Recombinant Soluble Human FcγRII: Production, Characterization, and Inhibition of the Arthus Reaction", <i>The Journal of Experimental Medicine</i> , Vol. 178, No. 5, pp. 1617-1628 (November 1, 1993)
	Kao, F. et al., "Genetics of Somatic Mammalian Cells, VII. Induction and Isolation of Nutritional Mutants in Chinese Hamster Cells", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 60, No. 4, pp. 1275-1281 (August 1968)
	Koene, H. et al., "FcγRIIIa-158V/F Polymorphism Influences the Binding of IgG by Natural Killer Cell FcγRIIIa, Independently of the FcγRIIIa-48L/R/H Phenotype", <i>Blood</i> , Vol. 90, No. 3, pp. 1109-1114 (August 1, 1997)



23552

PATENT TRADEMARK OFFICE

EXAMINER	DATE CONSIDERED
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.	

RECEIVED
JUN 21 2002
TECH CENTER 1800/2800



INFORMATION DISCLOSURE STATEMENT

IN AN APPLICATION

(Use several sheets if necessary)

Docket Number:

11669.92USU1

Application Number:

10/027,736

Applicant: PRESTA ET AL.

Filing Date: 12/19/2001

Group Art Unit: UNKNOWN

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Küster, H., et al., "Characterization and Expression of the Gene for the Human Fc Receptor γ Subunit", <i>The Journal of Biological Chemistry</i> , Vol. 265, No. 11, pp. 6448-6452 (April 15, 1990)
	Lawlor, D. et al., "Comparison of Class I MHC Alleles in Humans and Apes", <i>Immunological Reviews</i> , No. 113, pp. 147-185 (1990)
	Lehrnbecher, T. et al., "Variant genotypes of <i>FcyRIIIA</i> influence the development of Kaposi's sarcoma in HIV-infected men", <i>Blood</i> , Vol. 95, No. 7, pp. 2386-2390 (April 1, 2000)
	Liu, J. et al., "Characterization of Complex Formation by Humanized Anti-IgE Monoclonal Antibody and Monoclonal Human IgE", <i>Biochemistry</i> , Vol. 34, No. 33, pp. 10474-10482 (August 22, 1995)
	Luckow, V. et al., "Trends in the Development of Baculovirus Expression Vectors", <i>Bio/Technology</i> , 6:47-55 (January 1988)
	Nieto, A. et al., "Involvement of Fcy Receptor IIIA Genotypes in Susceptibility to Rheumatoid Arthritis", <i>Arthritis & Rheumatism</i> , Vol. 43, No. 4, pp. 735-739 (April 2000)
	Okayama, H. et al., "A cDNA Cloning Vector that Permits Expression of cDNA Inserts in Mammalian Cells", <i>Molecular and Cellular Biology</i> , Vol. 3, No. 2, pp. 280-289 (February 1983)
	Porges, A. et al., "Novel Fcy Receptor I Family Gene Products in Human Mononuclear Cells", <i>The Journal of Clinical Investigation</i> , Vol. 90, No. 5, pp. 2102-2109 (November 1992)
	Ravetch, J. et al., "Fc Receptors", <i>Annu. Rev. Immunol.</i> , 9:457-492 (1991)
	Ravetch, J., "Atopy and Fc receptors: mutation is the message?", <i>Nature Genetics</i> , Vol. 7, No. 2, pp. 117-118 (June 1994)
	Ravetch, J. et al., "Alternative Membrane Forms of FcyRIII(CD16) on Human Natural Killer Cells and Neutrophils", <i>The Journal of Experimental Medicine</i> , Vol. 170, No. 2, pp. 481-497 (August 1, 1989)
	Reff, M. et al., "Depletion of B Cells in Vivo by a Chimeric Mouse Human Monoclonal Antibody to CD20", <i>Blood</i> , Vol. 83, No. 2 pp. 435-445 (January 15, 1994)
	Repp, R. et al., "G-CSF-Stimulated PMN in Immunotherapy of Breast Cancer with a Bispecific Antibody to FcyRI and to HER-2/neu (MDX-210)", <i>Journal of Hematotherapy</i> , Vol. 4, No. 5, pp. 415-421 (October 1995)
	Riethmüller, G. et al., "Randomised trial of monoclonal antibody for adjuvant therapy of resected Dukes' C colorectal carcinoma", Vol. 343, No. 8907, pp. 1177-1183 (May 14, 1994)
	Rosa, F. et al., "The β_2 -microglobulin mRNA in human Daudi cells has a mutated initiation codon but is still inducible by interferon", <i>The EMBO Journal</i> , Vol. 2, No. 2, pp. 239-243 (1983)
	Salmon, J. et al., "FcyRIIA Alleles are Heritable Risk Factors for Lupus Nephritis in African Americans", <i>The Journal of Clinic Investigation</i> , Vol. 97, No. 5, pp. 1348-1354 (March 1996)



23552

PATENT TRADEMARK OFFICE

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.

FORM 1449*

INFORMATION DISCLOSURE STATEMENT

IN AN APPLICATION

(Use several sheets if necessary)

Docket Number:

11669.92USU1

Application Number:

10/027,736

Applicant: PRESTA ET AL.

Filing Date: 12/19/2001

Group Art Unit: UNKNOWN

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

	Sambrook et al., "Detection and Analysis of Proteins Expressed from Cloned Genes", <i>Molecular Cloning: A Laboratory Manual</i> , Chapter 18, pp. 18.2-18.88 (1989)
	Saper, M. et al., "Redefined Structure of the Human Histocompatibility Antigen HLA-A2 at 2.6 Å Resolution", <i>Journal of Molecular Biology</i> , Vol. 219, No. 2, pp. 277-319 (May 20, 1991)
	Seki, T., "Identification of multiple isoforms of the low-affinity human IgG Fc receptor", <i>Immunogenetics</i> , 30:5-12, (1989)
	Shields, R. et al., "High Resolution Mapping of the Binding Site on Human IgG1 for FcγRI, FcγRII, FcγRIII, and FcRn and Design of IgG1 Variants with Improved Binding to the FcγR", <i>The Journal of Biological Chemistry</i> , Vol 276, No. 9, pp. 6591-6604 (March 2, 2001)
	Smith, T. et al., "Comparison of Biosequences", <i>Advances in Applied Mathematics</i> , Vol. 2, No. 4, pp. 482-489 (December 1981)
	Stengelin, S. et al., "Isolation of cDNAs for two distinct human Fc receptors by ligand affinity cloning", <i>The EMBO Journal</i> , Vol. 7, No. 4, pp. 1053-1059 (April 1988)
	Story, C. et al., "A Major Histocompatibility Complex Class I-like Fc Receptor Cloned from Human Placenta: Possible Role in Transfer of Immunoglobulin G from Mother to Fetus", <i>The Journal of Experimental Medicine</i> , Vol 180, No. 6, pp. 2377-2381 (December 1, 1994)
	Stuart, S. et al., "Isolation and Expression of cDNA Clones Encoding a Human Receptor for IgG (FcγRII)", <i>The Journal of Experimental Medicine</i> , Vol. 166, No. 6, pp. 1668-1684 (December 1, 1987)
	Suggs, S. et al., "Use of Synthetic oligonucleotides as hybridization probes: Isolation of cloned cDNA sequences for human β ₂ -microglobulin", <i>Proc. Natl. Acad. Sci. USA</i> , Vol. 78, No. 11, pp. 6613-6617 (November 1981)
	Takahashi, H. et al., "Inhibition of Hepatic Metastases of Human Colon Cancer in Nude Mice by a Chimeric SF-25 Monoclonal Antibody", <i>Gastroenterology</i> , Vol. 108, No. 1, pp. 172-182 (January 1995)
	Valone, F. et al., "Phase Ia/Ib Trial of Bispecific Antibody MDX-210 in Patients with Advanced Breast or Ovarian Cancer that Overexpresses the Proto-Oncogene HER-2/neu", <i>Journal of Clinical Oncology</i> , Vol. 13, No. 9, pp. 2281-2292 (September 1995)
	van de Winkel, J. et al., "Human IgG Fc receptor heterogeneity: molecular aspects and clinical implications", <i>Immunology Today</i> , Vol. 14, No. 5, pp. 215-221 (1993)
	Walder, R. et al., "Oligodeoxynucleotide-directed mutagenesis using the yeast transformation system", <i>Gene</i> , 42:133-139 (1986)
	Warmerdam, P. et al., "A Single Amino Acid in the Second Ig-Like Domain of the Human Fcγ Receptor II is Critical for Human IgG2 Binding", <i>The Journal of Immunology</i> , Vol. 147, No. 4, pp. 1338-1343 (August 15, 1991)
	West, Jr., A. et al., "Crystal Structure and Immunoglobulin G Binding Properties of the Human Major Histocompatibility Complex-Related Fc Receptor", <i>Biochemistry</i> , 39:9698-9708 (2000)
	Wu, J. et al., "A Novel Polymorphism of FcγRIIIa (CD16) Alters Receptor Function and Predisposes to Autoimmune Disease", <i>The Journal of Clinical Investigation</i> , Vol. 100, No. 5, pp. 1059-1070 (September 1997)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form for next communication to the Applicant.